30-Mev linear electron ...

was designed as a homogeneous system with constant phase velocity (Fig. 2). Each of its six cells has four 4-mm openings to improve the evacuation of the system. The h-f power from the generator is fed to the accelerator through a standard square feeder waveguide (34 by 72 mm, 6 m long) wherein H_{10}-type waves are excited. This waveguide is enclosed on each side by glass windows of circular conical shape. The h-f generator is an unsoldered klystron equipped with a titanium getter and fed by a thyratron modulator. The modulator is fed with direct current from a rectifier with a voltage regulator at its primary winding. Modulator and klystron are connected by a 65-Mw pulse transformer (boost 4.63). The klystron operates at a maximum voltage of 320 kv. Its h-f excitation is made by a magnetron with a power of 10-15 kw. To prevent h-f breakdown in the klystron, its voltage supply is cut off automatically when excess currents amount to 30%, or if an h-f breakdown occurs in the accelerator part. The pulsed injection current is supplied by a three-electrode electron gun designed similarly to Pierce's double-electrode gun (Fig. 6). The vacuum system of the accelerator is connected to three titanium ion getter pumps as designed by the Fiziko-tekhnicheskiy institut AN USSR (Physicotechnical Institute AS Ukr.SSR). The necessary operating vacuum of $(2-4)\cdot10^{-6}$ mm Hg can be created

Card 2/3

50-Mev linear electron ...

by cascade pump and the [illegible] day during three to four months. [illegible] forepump (10^{-2} to 10^{-3} [illegible]). [illegible] in a separate building. [illegible] U^{238} target in a water pool. [illegible] get produces neutrons by (γ, n) on [illegible] ~1.5 Mev have Maxwellian [illegible] source. The entire unit is [illegible] vided with several experimental [illegible] The current, spectrum, pulse [illegible] density of the electron beam [illegible] time of flight and background. [illegible]

SUBMITTED: December 18, 1961

Card 3/3

POLUKHIN, P.I.; GUN, G.Ya.; POLUKHIN, V.P.; PRUDKOVSKIY, B.A.; KOROLEV, V.M.

Using the method of electrohydrodynamic analogies in the theory of metalworking by pressure. Izv. vys. ucheb. zav.; chern. met. 8 no.5:57-64 '65. (MIRA 18:5)

1. Moskovskiy institut stali i splavov.

Korolev, V. M.

6

4E2C

Magnesium-iron castings. N. I. Nemilov, V. M. Korolev, A. A. Sankin, and V. P. Gorshin. U.S.S.R. 102,675, Apr. 30, 1955. Mg-Fe is treated with a flux contg. feldspar and an equal amt. of glass cullet. The latter is added to prevent black spots in the casting. M. Hosch

KOROLEV, V.M.Cand Tech Sci -- (diss) "Study of certain technological peculiarities of smelting pig iron with spheroidal graphite."

Mos,1957. 14 pp. (Min of Aviation Industry USSR.)

(KL, 8-58, 106)

18(7) SOV/128-59-5-8/35

AUTHOR: Korolev, V.M., Canditate of Technical Sciences

TITLE: Inclusions in Magnesium Iron and Methods of their Elimination

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 5, pp 17-18 (USSR)

ABSTRACT: It is known that the mechanical properties of castings are diminished to a large degree by the inclusions of foreign substances (Tab. 1). (Tab. 2) gives a survey of the ratio of non metallic inclusions (Fe_2O_3, Al_2O_3, SiO_2) in various types of cast iron with regard to treatment and non-treatment with magnesium. Tab. (3) shows a survey of the various contents of carbon and sulphur. Formation and factors of dependance of the inclusions (black spots) are discussed, especially the effect of treating the molten iron with magnesium. A new method of reducing the non-metallic inclusions by treating the molten iron with cryolite (0,5 - 1%) is described. The cryolite is spread on the bottom of the

Card 1/2

ladle together with a graphite modifier and a magnesium alloy. Then the iron is cast in. For the magnesium alloy, an alloy containing 78 -82% nickel and 18-22% magnesium is recommended. The method can be varied by treating the iron with magnesium before. The ladle has an average capacity of 500 kg cast iron. There are 4 Tables.

Card 2/2

S/128/60/000/006/005/007/XX
A104/A133

AUTHORS: Korolev, V. M., and Stepanov, V. M.

TITLE: The use of water glass for large-size dispensable pattern castings

PERIODICAL: Liteynoye proizvodstvo, no. 6, 1960, 16-17

TEXT: The authors describe the difficulties arising during casting of large-size castings and give the details of a method which enables the production of 20 types of thin-walled castings made of 35ХГСЛ (35KhGSL) and 27ХГСНМЛ (27KhGSNML) steels. The method has been developed in cooperation with V. S. Petrova, Ye. G. Suchilina, A. Kh. Vasil'yev, I. M. Petrova and Ye. P. Prozorova. The castings have 2 - 20 mm walls, a maximum dimension of 1,000 mm and 30 kg weight. For small-batch production the uneconomical metal press molds were replaced by gypsum molds which, despite of a number of shortcomings, ensure satisfactory surface finish and require only a minimum of mechanical processing. A brief description of the production of the gypsum molds modelled on wooden patterns is given. Before filling with wax not exceeding 45°C, the press mold was coated with a 50% castor oil solution in

Card 1/3

The use of water glass...

alcohol. After 2 - 5 hours the wax models were shaken out and placed in boxes of 14 - 18°C. The wax surface was rubbed with an ether aldehyde fraction or acetic acid while 0.02% chloride was added to the wax. The viscosity of facing suspension was increased to 110 - 120 sec^2. The ceramic coating consisted of 52% marshalite and 48% water glass for the first layer and 47% marshalite and 53% water glass for all following layers. The water glass modulus was increased by the addition of ammonium chloride. A peeling off of the ceramic coating was prevented by substituting the moist fixative (20% solution of NH_4Cl) by dry ammonium chloride added to 3 - 3.5% powdery quartz sand. The surface finish was improved by K01A quartz sand on the first layer and K02A quartz sand on the second layer. About 9 - 12 refractory coatings were applied depending on the size and the weight of the pattern. The ceramic molds were air-dried for 6 - 12 hours, all gaps closed and dry filler was added. The upper part of the flask was packed with a 50 - 100 mm layer of water glass molding mixture and roasted for 4 - 8 hours at 800 - 850°C. The quality of ceramic coatings depends on the Na_2O- and NaCl-content. There were 0.8 - 1.3% of Na_2O after casting which decreased to 0.3% after roasting at 800°C. The amount of NaCl was reduced to 0.12 -

Card 2/3

The use of water glass...

0.3% by soaking in water for 2 hours at 85°C. The mechanical and physical properties of the coatings were as follows: gas permeability 38 - 46 units; bending strength 1.6 - 1.7 kg/sq cm; compression strength at 600°C about 20 kg/sq cm and at 850°C about 2.5 kg/sq cm. Over 950°C the compression strength increases again. By addition of 5 - 7.5% alumina or circonium oxide the compression strength increased to 5 - 7 kg/sq cm at roasting temperatures. As large-size castings require outsize flasks the shells were roasted by adding quartz sand. The subsequent addition of quartz sand decreased the temperature and caused a poor surface finish. The ceramic coating was partly crushed on flat walls due to volumetric expansion of quartz sand. To prevent this, the quartz was replaced by chamotte grains of 1 - 5 mm. In such cases 50% of either circonium peroxide, magnesite, alumina or any other similar compound should be added. The practice showed that large-size castings should be assembled in vertical position. The frequently occuring microcracks and even visible cracks in thin-walled (less than 5 mm) 35ХГСЛ (35KhGSL) and 27ХГСНМЛ (27KhGSNML) steel castings originate in the 1 mm deep decarbonized layer and expand in both directions during heat treatment. There is 1 figure.

Card 3/3

BIDULYA, P.N.; KOROLEV, V.M.; STEPANOV, V.M.

Methods in investigating metal fluidity and the formation of shrinkage cavities. Lit. proizv. no.8:29-31 Ag '61.
(MIRA14:7)

(Founding—Testing)

KOROLEV, Vasiliy Mikhaylovich; STEPANOV, Vasiliy Matveyevich; SHUMSKAYA, L.G., red.izd-va; KARPOV, I.I., tekhn. red.

[Precision casting of shaped parts]Fasonnoe lit'e po vyplavliaemym modeliam. Moskva, Oborongiz, 1962. 157 p. (MIRA 16:3)
(Precision casting)

KOROLEV, V.M.

Narure and mechanism of the formation of nonmetallic nsclusions in magnesium iron, and methods for their elimination. Analele metalurgie 16 no.1:201-210 Ja-Mr '62.

ACCESSION NR: AT4016067 S/2698/63/000/000/0229/0234

AUTHOR: Stepanov, V. M.; Korolev, V. M.

TITLE: Investigation of the physical and mechanical properties of nickel-iron alloys

SOURCE: Soveshchaniye po teorii liteyny*kh protsessov. 8th, 1962. Mekhanicheskiye svoystva litogo metalla (Mechanical properties of cast metal). Trudy* soveshchaniya. Moscow, Izd-vo AN SSSR, 1963, 229-234

TOPIC TAGS: nickel iron alloy, iron, iron alloy, nickel, heat resistant alloy, nickel alloy, steel

ABSTRACT: The authors studied the physical and mechanical properties of the structural steels 35KhGSL and 27khGSNML and heat-resistant nickel-iron alloys. Laboratory experiments were carried out in an electric oven under a vacuum in an inert gas. Tabulated results show that the quality of nickel-iron castings is improved by making the melted metal slide in a direction opposite to the rotation of the centrifugal casting machine, leading to a higher density. Higher quality castings are also obtained by repeated vacuum casting of the alloy, eliminating heterogeneity of the chemical composition. Orig. art. has: 2 figures and 5 tables.

Card 1/2

L 16302-65 EWT(m)/EPF(n)-2/EWA(d)/EWP(t)/EWP(k)/EWP(b) Pf-4/Pu-4 IJP(c)/
AFWL/ASD(m)-3/AFETR/ASD(f)-2/AFTC(p)/SSD JD/HW/JG
ACCESSION NR: AP5000944 S/0136/64/000/012/0071/0074

AUTHOR: Krunin, A. V.; Solov'yev, V. Ya.; Chernyshev, V. N.; Izotov, V. M.; Korolev, V. M.

TITLE: Investigation of the basic indices in cold rolling of niobium

SOURCE: Tsvetnyye metally, no. 12, 1964, 71-74

TOPIC TAGS: niobium, cold rolling, specific pressure, friction, torque, forward slip

ABSTRACT: An investigation has been made of the effect of reduction in cold rolling of niobium on the total and specific roll pressure, torque, friction, and forward slip, and also of the effect of the width of the rolled bar on the mean specific roll pressure and spread. Ingots of 99.88%-pure, vacuum arc-melted niobium were preforged and cold rolled into 5-mm thick strip. Test specimens 30 mm wide and 120 mm long cut from this strip were subjected to recrystallization annealing in a vacuum of $1 \cdot 10^{-5}$ mm Hg at 1200C, and cold rolled with a reduction of 5—80% in one pass. The mean specific pressure was found to rise sharply with increasing reduction, reach a maximum of about

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L 18302-65

ACCESSION NR: AP5000944

68 kg/mm² at a reduction of 20%, and then to decrease gradually to about 85% of the maximum value at a reduction of 80%. The approximate value of the friction coefficient for cold rolling of niobium in ground, cast-iron rolls was determined as 0.08—0.09. The initial width of the strip was found to have an insignificant effect on the mean roll pressure. The absolute magnitude of the spread increased almost linearly with increasing reductions from 0.7 mm at 20% reduction to 2.9 mm at 80% reduction. Orig. art. has: 6 figures and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 000 ATD PRESS: 3156

Card 2/2

GLOZMAN, Il'ya Abramovich; KOROLEV, V.M., red.

[Piezoceramics in electronic technology] P'ezokeramicheskie materialy v elektronnoi tekhnike. Moskva, Energiia, 1965. 191 p. (MIRA 18:5)

KOROLEV, V. M.

KOROLEV, V. M. -- "Investigation of the Operation of a Pneumatic Stoker and a Chain Grate With Overhead Feed in the Burning of Clinkering Coal" Sub 1 Oct 52, All-Union Order of Labor Red Banner Heat Engineering Sci Res Inst imeni F. E. Dzerzhinskiy. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Vechernaya Moskva, January-December 1952

TATISHCHEV, S. V. (Prof.); KOROLEV, V. M.

Furnaces

Design for VTI furnaces utilizing a concentrated air stream for fuel intake. Za ekon. top. 9, No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

KOROLEV, V.M.

5396. PNEUMATIC JET STOKING OF FUEL. Korolev, V.M. and Tatishchev, S.V. (Elekt. Sta. ([illegible], Moscow), June [illegible], [illegible] 6-9). An attempt is made to explain the bases for designing an [illegible] jet stoker which utilizes for fuel feed the energy of a concentrated stream of air. The main elements are fuel feed regulator; an inclined sleeve conveying fuel to the ejector; air stream nozzle; and table for [illegible] dispersion.

V.G.A.

SOV/124-57-3-2904

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 39 (USSR)

AUTHOR: Korolev, V. M.

TITLE: Formula for the Jet Velocity in the Pneumatic-nozzle Fuel Feeder of the VTI Burner-stoker Type Furnace, and Equation for the Dispersal of the Admixture (Formula skorosti strui v soplovom pnevmaticheskom zabrasyvatele topliva fakel'no-sloyevoy topki VTI i uravneniye razgona primesi)

PERIODICAL: Sb. nauch.-issled. rabot. Ivanovsk. tekstil'n. in-t, 1955, Nr 7, pp 118-124

ABSTRACT: Bibliographic entry

Card 1/1

KOROLEV, V.M.; USTINOV, B.B.

Gas heating of drying cans. Izv.vys.uchab.zav.; tekh.tekst.prom. no.6:114-117 '59. (MIRA 13:4)

1. Ivanovskiy tekstil'nyy institut.
(Drying apparatus--Textile fabrics)

KOKOLEV, V.M., SHINGAREV, R.V., VATAGIN, Yu.M.

Conversion of sizing machines to gas. Izv.vys.ucheb.zav.; tekh. tekst.prom. no.3:86-91 '60. (MIRA 13:7)

1. Ivanovskiy tekstil'nyy institut im. M. V. Frunze.
(Sizing (Textile)) (Textile machinery)

KOROLEV, V.M.; PRONIN, Ye.I.

Warp slasher dryer with crosswise and lengthwise blowing controlled by means of reversible blades. Izv.vys.ucheb.zav.; tekh.tekst. prom. no.5:95-98 '61. (MIRA 14:11)

1. Ivanovskiy tekstil'nyy institut imeni M.V. Frunze.
(Textile machinery) (Dryer apparatus)

KOROLEV, V.M.; RAGOZINA, N.M.

Drying of dyed cotton in a perforated drum dryer. Izv.vys.ucheb. zav.; tekh.tekst.prom. no.2:125-129 '63. (MIRA 16:6)

1. Ivanovskiy tekstil'nyy institut imeni M.V.Frunze.
(Cotton—Drying)

L 36940-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/WB

ACC NR: AP6019713 SOURCE CODE: UR/0128/66/000/006/0003/0005

AUTHOR: Korolev, V. M. (Candidate of technical sciences); Kolobashkin, B. M. (Candidate of technical sciences); Zhmurina, Yu. A. (Engineer); Maslov, A. D. (Engineer); Malinina, A. D. (Technician); Kuyanova, M. M. (Technician)

ORG: none

TITLE: High-strength stainless steel VNL-1

SOURCE: Liteynoye proizvodstvo, no. 6, 1966, 3-5

TOPIC TAGS: stainless steel, high strength steel, austenitic martensite steel, precipitation hardenable steel/ VNL-1 stainless steel

ABSTRACT: A new austenitic-martensitic cast stainless steel designated VNL-1 has been developed. The steel contains 0.08% max C, 0.9% max Mn, 0.75% max Si, 14.07—14.60% Cr, 6.45—7.50% Ni, 0.68—0.83% Mo, 0.016—0.018% S, and 0.028—0.30% P. At room temperature the steel has a tensile strength of 111—123 kg/mm^2, a yield strength of 84—93 kg/mm^2, an elongation of 11.8—19.0%, a reduction of area of 37—45%, and a notch toughness of 5—8 mkg/cm^2. The corresponding figures for -196C are 161—180 kg/mm^2, 107—147 kg/mm^2, 9—16%, 14—21%, and 4—7%. At 500C the steel has a tensile strength of 65—80 kg/mm^2, an elongation of 8—10%, and a reduction of area of 20—40%. In cyclic tests under a stress of 77.5—88 kg/mm^2, the steel withstood

Card 1/2 UDC: 621.74:669.15-194.55

L 36940-66

ACC NR: AP6019713

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824820004-3"

6000—14000 cycles at a frequency of 8 cycles/min. Under axial stresses, the steel has a fairly low notch sensitivity. The steel can be successfully welded with argon-shielded arc in either the as-cast or heat-treated conditions. Fully heat-treated welds have a strength of over 90 kg/mm^2 and a satisfactory notch toughness in the range -196C to 20C. The corrosion resistance in SO_2 and in sea water of VNL-1 is equivalent to that of EI696 and 268L steels. The steel is used for investment castings into ceramic molds. Orig. art. has: 7 figures and 4 tables. [FM]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 5039

Card 2/2

L 27856-66 EWT(1)/EWA(h)

ACC NR: AP5028467 SOURCE CODE: UR/0286/65/000/020/0040/0040

INVENTOR: Kamynin, Yu. N.; Guts, L. V.; Korolev, V. M.

ORG: none

TITLE: Contactless photorelay. Class 21, No. 175565. [announced by the Lugansk Branch of the "Giprougleavtomatizatsiya" Institute (Luganskiy filial instituta "Giprougleavtomatizatsiya")]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 40

TOPIC TAGS: photoelectric relay, contactless relay

ABSTRACT: This Author Certificate introduces a contactless photorelay (see figure) which contains a photocell, a pulse oscillator, storage capacitors, and a trigger section. To increase both the speed and the sensitivity of the relay, it is equipped

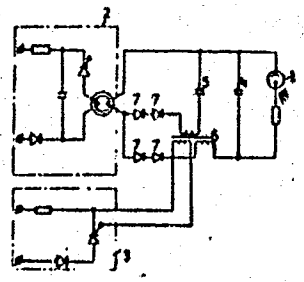

Fig. 1. Contactless photorelay

1 - Photocell; 2 - pulse generator; 3 - trigger section; 4 and 5 - storage capacitors; 6 - pulse transformer; 7 - diodes.

Card 1/2

UDC: 621.318.58.066.63

L 27856-66

ACC NR: AP5028467

with 1) two storage capacitors, one of which is connected across the photocell, and, 2) a current comparison element in the form of a pulse transformer. One of the three windings of the transformer is connected to the trigger section, and the other two are connected through diodes and storage capacitors to the pulse oscillator. Orig. art. has: 1 figure.

[JR]

SUB CODE: 09/ SUBM DATE: 06Aug64/ ATD PRESS: 4165

Card 2/2

KOROLEV, V.M.; KOLOTILOV, V.C.

Convection drying of fabrics and other textile widths permeable to air on perforated surfaces. Izv.vys.uchseb.zav.; tekh.tekst.prom. no.3:125-131 '65. (MIRA 18:8)

1. Ivanovskiy tekstil'nyy institut imeni Frunze.

KOROLEV, V.M.; KOLOTILOV, V.G.

Some of the new trends in the design of drying- and stretching machines for woolens. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.4:158-163 '65. (MIRA 18:9)

1. Ivanovskiy tekstil'nyy institut imeni Frunze.

UDALOV, Nikolay Petrovich; KOROLEV, V.M., red.

[Transistor sensing elements] Poluprovodnikovye datchiki. Moskva, Energiia, 1965. 238 p. (MIRA 18:9)

L 2999-66 EWT(m)/EWP(t)/EWP(b) JD

ACCESSION NR: AP5013321

UR/0148/65/000/005/0057/0064
669.1:621.731

AUTHOR: Polukhin, P. I.; Gun, G. Ya.; Polukhin, V. P.; Prudkovskiy, B. A.; Korolev, V. M.

TITLE: Adaptation of the electrohydrodynamic analogue method to the theory of metal processing under pressure

SOURCE: IVUZ. Chernaya metallurgiya, no. 5, 1965, 57-64

TOPIC TAGS: plastic flow, mathematic model, metallurgic process, pressure casting

ABSTRACT: The application of the theory of complex variables to plastic flow during metal processing was studied by the mathematical modeling of potential fields. In particular, the method of electrohydrodynamic analogues was found to be directly applicable to metal processing theory. Three specific cases are considered: the general theory of plane-parallel plastic flow, the drawing of profiles of intricate form, and the pressing of profiles of intricate form. Plastic flow equations are given for plane-parallel flow in terms of complex variables, utilizing a mathematically postulated Q-plane, which allowed approximate calculations to be made for the energy and strength parameters of the process. The flow pattern is presented,

Card 1/2

Card 2/2

KOROLEV, V.N.

Organizing, financing, and implementing research work in factories. Zab.lab.21 no.9:1141-1142 '55. (MLRA 9:1)

1.Nachal'nik TSentral'noy zavodskoy laboratorii zaveda "Elektrosila". (Laboratories)

S/112/59/000/013/007/067
A002/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 13, p. 12, # 26244

AUTHOR: Bazhenova, T. Yu., Korolev, V. N.

TITLE: On a Method of Estimating the Short-Time Electric Strength of Nonuniform Dielectrics During Electric Aging

PERIODICAL: Tr. I-y Mezhvuzovsk. konferentsii po sovrem. tekhn. dielektrikov i poluprovodnikov 1956g., Leningrad, 1957, pp. 144-148

TEXT: Rapid tests for selecting electrical insulation materials are usually not equivalent to real conditions, since they do not uncover the available reserve of electrical strength. However, they are applicable for comparing a new materia or design with a material which has proven its efficiency during operation. During these tests, not only the methods are important, but also the method of estimating the results. For the possibility of estimating a reduction in the electric strength of compound insulation of electric machines, the authors suggest a method in which the introduction of an elementary aging system and a

Card 1/2

S/112/59/000/013/007/067
A002/A001

On a Method of Estimating the Short-Time Electric Strength of Nonuniform Dielectrics During Electric Aging

statistical processing of tests results are combined. During the aging of windings, specimens with a minimum short-time electric strength are punctured in the first place. It is assumed that the short-time strength of specimens punctured during aging by the moment of puncturing the specimens left over after aging, was lower than the strength of specimens sustaining the aging. This estimation is sufficient for plotting an integral curve of the distribution of the specimens after aging with an account of the punctured ones. A regularity was established in the aging of specimens having different initial short-time electric strengths. Results of statistical investigations of the probability of a puncturing from a number of tests are furnished. There are 2 references.

ASSOCIATION: Z-d "Elektrosila" imeni S. M. Kirova (Plant "Elektrosila" imeni S. M. Kirov)

Ye. N. P.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

KOROLEV, V.N.

Korolev, V.N. and Bazhenova, T.Yu. [Leningrad, Zavod "Elektrosila" imeni S.M. Kirova (Plant "Elektrosila" imeni S.M. Kirov)] The Electric Strength of Continuous Compounded Insulation and Its Decrease Under the Influence of High-voltage Industrial Frequency

(The Physics of Dielectrics; Transactions of the All-Union Conference on the Physics of Dielectrics) Moscow, Izd-vo AN SSSR, 1958. 245 p. 3,000 copies printed.

This volume publishes reports presented at the All-Union Conference on the Physics of Dielectrics, held in Dnepropetrovsk in August 1956, sponsored by the "Physics of Dielectrics" Laboratory of the Fizicheskiy institut imeni Lebedeva AN SSSR (Physics Institute imeni Lebedev of the AS USSR), and the Electrophysics Department of the Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University).

105-58-3-24/31

AUTHORS: 1) Zalesskiy, A. M. Professor, Doctor of Technical Sciences
2) Korolev, V. N. , Engineer
3) Abramov, A. I. , Candidate of Technical Sciences

TITLE: On the Selection of Test Voltages for the Winding Insulation in High-Voltage Motors (O vybore ispytatel'nykh napryazheniy vitkovoy izolyatsii v vysokovol'tnykh dvigatelyakh)

PERIODICAL: Elektrichestvo, 1958, Nr 3, pp. 84 - 86 (USSR)

ABSTRACT: This is a comment on the paper by A. I. Abramov in the periodical "Elektrichestvo", 1955, Nr 9 and by Z. G. Kaganov in the same periodical, 1957, Nr 6.
1) A. I. Abramov points to the fact that the test voltage, amounting to 1,3 U at 50 cycles is insufficient for the interwinding insulation of the machine. This is generally known, and the controversy is only about the problem by which voltage it is to be replaced. The method given by Abramov shows an essential deficiency: The test voltage is by him connected with the limiting of overload voltage, without taking into consideration that the test voltage is destined for a separation of useless or inadequate winding coils.

Card 1/2

105-58-3-24/31

On the Selection of Test Voltages for the Winding Insulation in High-Tension Motors

Zalesskiy consented to a proposal by Z. G. Kaganov to test the winding insulation with a test voltage of 2,5 kV_{max} per winding after the coils have been embedded in the slots.
2) The recommendations by Kaganov for test voltages are unfounded. Just as unfounded is the assumption that the surge front of the cut-off wave is analogous to the surge front of the switch-on wave, and that this wave will act in its totality on the insulation of the winding.
3) Abramov does not agree with the method of the selection of test voltages and with their values as proposed by Kaganov. It is shown that at present no convincing reasons confirmed by experiments can be submitted for an increase of test voltages above 1500 V_{max}. There are 1 table and 2 Soviet references

ASSOCIATION: 1)Leningradskiy politekhnicheskiy institut im. Kalinina (Leningrad Polytechnical Institute imeni Kalinin)
2) Zavod "Elektrosila" im. Kirova ("Elektrosila" Plant imeni Kirov) 3)Moskovskiy energeticheskiy institut (Moscow Institute for Power Engineering)

Card 2/2

S/120/63/000/001/022/072
E140/E135

AUTHORS: Gorbachev, V.M., Korolev, V.N., and Uvarov, N.A.

TITLE: High-speed oscillograph using travelling-wave tubes

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1963, 98-101

TEXT: A high-speed oscillograph using 13ЛО102М (13LO102M) travelling-wave cathode-ray tubes is intended for photographic registration of two non-repeating high-speed processes. The vertical sensitivity is 2 V/mm, the timebase duration for deflection across the 100 mm screen varies between 0.1 and 3 μs; the delay in triggering the timebase is not more than 30×10^{-9} sec.
There are 4 figures.

SUBMITTED: February 20, 1962

Card 1/1

GORBACHEV, V.M.; KOROLEV, V.N.; UVAROV, N.A.

High-speed oscillograph on traveling wave tubes. Prib. i tekh. eksp. 8 no.1:98-101 Ja-F '63. (MIRA 16:5)
(Oscillograph)

KOROLEV, V.N., inzh.

Testing of the insulation of high-voltage machines. Elektrotekhnika 35 no.12:29-31 D '64. (MIRA 18:4)

SAVEL'YEV, V.P.; KOVAL'SKAYA, A.V.; BERUKOV, F.V.; GALKIN, Yu.P.; KROKHOTIN, A.I.; SINEGUBKIN, V.V.; EPSHTEYN, A.L.; TSIRKIN, M.Z.; LAVRUSHINA, N.S.; GUBAREV, A.A.; KONTOROVICH, L.M.; KOROLEV, V.N.; USTIMENKO, I.L.; KURNAKOV, S.N.; POLUSHKIN, M.K.; LIBE, N.A.; IVANOV, N.P.; D'YACHENKO, G.I.; FILIPPOV, I.F.; KHUTORETSKIY, G.M.; VARTAN'YAN, G.P.; RUSOV, Ye.Kh.; BARKAN, L.Z.; KOLONSKAYA, L.M.; GORBATENKO, F.I.

Inventions. Energ. i elektrotekh. prom. no.4:39 O-D '64. (MIRA 18:3)

KOROLEV, V.N., inzh.; TSIRKIN, M.Z., inzh.; LAVRUSHINA, N.S., inzh.; KONTOROVICH, L.M., inzh.; GUBAREV, A.A., inzh.; Prinimal uchastiye MEL'SHTEYN, L.G.

Insulation of bar winding heads of the stators of hydrogenerators and turbogenerators. Elektrotekhnika 36 no.8:16-18 Ag '65. (MIRA 18:9)

1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta elektromekhaniki (for Mel'shteyn).

KOROLEV, V.N., kapitan 2-go ranga

Operations research in the U.S. Navy. Mor. sbor. 49 no. 12: 72-76 D '65 (MIRA 19:1)

L 36131-66 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) MJW/JD/HW/JG
ACC NR: AP6016579 (N) SOURCE CODE: UR/0182/66/000/005/0020/0023

AUTHOR: Korolev, V. N.

ORG: none

TITLE: Fabrication of small-diameter extra-thinwalled components from plastic and low-plastic metals

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 5, 1966, 20-23

TOPIC TAGS: FABRICATED STRUCTURAL METAL, molybdenum alloy, thinwalled component, metal turning, metallurgic research, lathe / TsM-2A molybdenum alloy

ABSTRACT: Extra-thinwalled (0.05-0.1 mm) parts may be fabricated by ball reeling in a lathe (Fig. 1). Curved or tubular blank 13 slipped over smooth hardened arbor 14 serves, as it were, as the inner ball-bearing race. Working balls 3 are located around the perimeter between the blank and supporting cones 6 which represent the outer ball-bearing race. The cones are adjusted to the desired pressure which causes the balls to compact the surface of the blank during the latter's rotation together with the arbor mounted in the lathe spindle. The cones can be caused to approach or recede by adjusting nut 1; this causes the balls to approach to or recede from the center and to correspondingly change the diameter of the blank to the desired extent.

Card 1/3 UDC: 621.733.735.34

L 36131-66
ACC NR: AP6016579

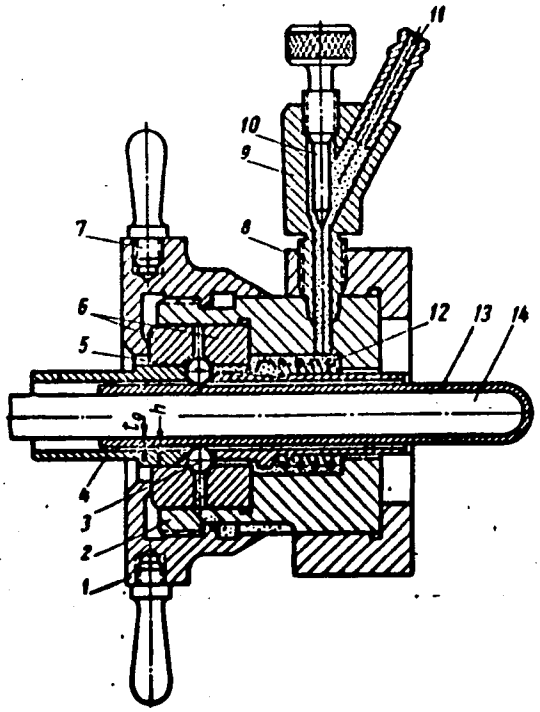

Fig. 1. Adjustable ball reeling:

1 - nut; 2 - housing; 3 - balls; 4, 5 - separator bushing; 6 - supporting cones; 7 - lever; 8 - holder; 9 - sleeve; 10 - needle; 11 - nipple; 12 - spring; 13 - blank; 14 - arbor

Card 2/3

KOMAR, A.P., akademik; VOROB'YEV, A.A.; KOROLEV, V.O.

Measurement of the fluctuations of ionization produced in argon by alpha particles. Dokl. AN SSSR 136 no.4:795-797 F '61.
(MIRA 14:1)

1. Fiziko-tekhnicheskiy institut Akademii nauk SSSR.
2. Akademiya nauk USSR (for Komar).
(Alpha rays) (Argon) (Ionization of gases)

PEREVOZCHIKOV, B.S.; SANNIKOV, S.S.; PASMANIK, A.I.; Prinimali uchastiye: PROTOPOPOVA, T.I.; [illegible]SHAKOV, Yu.A.; KOROLEV, V.O.; TROSTYANITSER, G.N.; TR[illegible]SKIY, G.A.; DEVYATOV, I.I.

Adjustment of low-flash forging on a 4000-ton, NKMZ crankshaft hot forging press. Kuz.-shtam. proizv. 3 no.8:41-43 Ag '61. (MIRA 14:8)

(Forging) (Power presses)

L 02193-67 EWT(m)/T DJ/JAJ

ACC NR: AP6032091 (A) SOURCE CODE: UR/0256/66/000/009/0069/0070

AUTHOR: Vilenkin, A. V. (Engineer; Lieutenant Colonel; Candidate of technical sciences); Bessmertnyy, K. I. (Engineer; Lieutenant Colonel); Korolev, V. P. (Engineer; Major)

36
35
B

ORG: none

TITLE: Protective storage of machinery by lubricant additives

SOURCE: Vestnik protivovozdushnoy oborony, no. 9, 1966, 69-70

TOPIC TAGS: lubricant additive, lubricant viscosity, lubricating oil /AKOR-1 additive

ABSTRACT: The AKOR-1 additive is obtained by processing certain low viscosity oils with nitric acid, followed by neutralization with alkali to which stearin has been added. Adding 3—20% of AKOR-1 to any regular lubricating oil will keep machinery free from rust for two to three years. The following percentages are used, according to conditions: 3% for machinery stored in heated places, 5—6% if stored in unheated places, 10% if kept in the open air, and 15—20% if stored in subtropical or coastal areas. The maintenance costs per motorized vehicle are

Card 1/2

L 02193-67

AP6032091

reduced by 32 to 46 rubles for five years if AKOR is used. The characteristics of regular oils to which AKOR-1 has been added are described in detail in a pamphlet entitled "Inhibited oils and fuels" (Inhibirovannyye masla i topliva) published by the Central Scientific Research Institute for Technical Information and Economics (Tsentral'nyy nauchno-issledovatel'skiy institut tekhnickeskoy informatsii i ekonomii) of Neftegaz (Coal and gas) in 1964.

SUB CODE: 11, 13/ SUBM DATE: none/

Card 2/2 egk

KOROLEV, Vladimir Pavlovich; TARARUKHIN, A., red.; SHLYK, M., tekhn. red.

[Under new conditions]V novykh usloviiakh. Moskva, Mosk. rabochii 1961. 50 p. (MIRA 15:12)
(Moscow Province--Agriculture)

L 22830-66 FSS-2/EWT(l)/EWT(m)/EWP(v)/EWP(j)/T/EWP(t) IJP(c) WW/WB/DJ/RM

ACC NR: AP6009319 (A) SOURCE CODE: UR/0256/65/000/009/0047/0049

AUTHOR: Korolev, V. P. (Engineer, Major)

ORG: None

TITLE: Preservation of armament

SOURCE: Vestnik protivovozdushnoy oborony, no. 9, 1965, 47-49

TOPIC TAGS: ordnance engineering, ammunition storage, lubricant

ABSTRACT: After a brief review of general requirements for preserving weapons and engineering materials in storage, the author discusses some new means and products for protecting them from the effect of humidity in storehouses. In general, the humidity must not exceed 60% in case of metal articles and 40% for electric and electronic equipment. It was mentioned that such lubricating greases as canon grease, petrolatum, GOI-54 or TsIATIM protect materials only during 6 to 12 months. The use of new lubricants of higher quality was recommended. The protection by a new PVK canon grease with an one-percent addition of inhibitor was from 2 to 4 times longer than by applying ordinary canon grease. Due to its higher adhesive properties, the new grease can be used at temperatures of 50 to 55 C. An improved SKhK lubricating grease was used instead of UP petrolatum for open air storages under various

Card 1/2

L 22830-66

ACC NR: AP6009319

climatic conditions. It was not affected by rain. The lubricating oils of NG and K types can be employed for protection of various vehicles parts. They are not fit for operating conditions and must be removed. However, by adding AKOR inhibitor, the MT-16p and AU oils can be used for preservation in storage as well as under operating conditions. The use of plastic covers and hoods made of B-118 polyvinyl chlorides was recommended for temperatures higher than -15 C. In case of lower freezing temperatures (up to -60 C), the polyethylene covers are to be used. The effect of sun-rays on the aging of covers is mentioned. The introduction of anti-corrosion inhibitors for preservation of metals was also recommended. The NDA (nitrite-dicyclohexyl-ammonium) and urotropin solutions are widely used. The impregnation of wrapping paper by volatile inhibitors was mentioned. The covering of steel surfaces with sodium nitrite and benzoate was also discussed. The effect of humidity percentage on the corrosion rate was considered and the use of sorbents (at least 1 kg per 1 cu m) as dehumidifier was recommended. The arrangement of hermetic sealing (use of ZZK-3 and U-20A putties) was briefly examined.

SUB CODE: 19 / SUBM DATE: None / ORIG REF: 000 / OTH REF: 000

Card 2/2

KOROLEV, V.S.

Kazakh S.S.R. Prom.koop. no.1:8 Ja '57. (MLRA 10:4)

1. Predsedatel' pravleniya Kazpromsoveta.
(Kazakhstan--Cooperative societies)

Korolev, V. S.

KOROLEV, V.S., tekhnik distantsii (Stantsiya Mushketovo, Donetskoy dorogi).

Useless work. Put' i put. khoz. no.10:36 O '57. (MLRA 10:11)
(Railroads--Management)

ACC NR: AP6025058 SOURCE CODE: UR/0281/66/000/002/0136/0144

AUTHOR: Alad'yev, I. T. (Moscow); Gorlov, I. G. (Moscow); Dodonov, L. D. (Moscow); Korolev, V. S. (Moscow); Fedynskiy, O. S. (Moscow)

ORG: none

TITLE: Critical heat flows and heat emission with potassium boiling in pipes

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 2, 1966, 136-144

TOPIC TAGS: potassium, heat flow, pipe flow, physical property, liquid

ABSTRACT: The authors discuss the results of experimental studies into critical heat flows and heat emission with flowing potassium boiled in tubes under pressures of 1.1--1.3 bar. This research was conducted at ENIN im. G. M. Krzhizhanovskiy in the period from 1960 to 1964. Two identical test facilities were used for these studies, and consisted of a closed-loop circulatory system with tubing made of 1Kh18N9T stainless steel. The potassium was circulated by means of an electromagnetic pump, with discharge measured by an electromagnetic flowmeter, systematically calibrated against a volumetric flowmeter. A block diagram of the test rig is shown in Fig. 1. Test methodology and result processing techniques are discussed. Preliminary argon blow-through of the system was employed, and the commercial potassium employed (TU No. 2010 55) had a melting temperature of 333.6 K. It is found that: 1) the general laws governing critical heat flows and heat emission for boiling potassium are the same as

Card 1/3 UDC: 536.248.2:546.32.536.423.1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824820004-3

ACC NR: AP6025058

Diagram of test set up: 1 - overflow reservoir, 2 - system reservoir, 3 - electromagnetic pump, 4 - electromagnetic flowmeter, 5 - primary heating element, 6 - auxiliary heating element, 7 - experimental section, 8 - protective covering, 9 - cooling unit, 10 - diffusion trap, 11 - variable level tank, 12 - volumetric flow-meter, 13 - reticulate filter, 14 - control valve, 15 - stopper valve, 16 - cold trap, 17 - analysis sampling, 18 - (air) valve

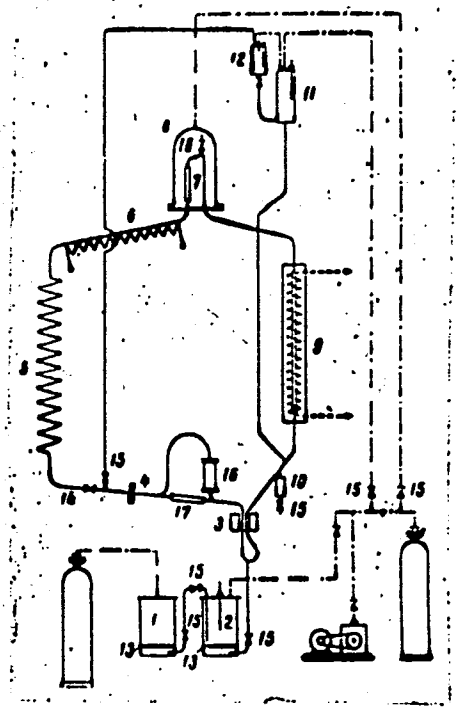

Figure 1.

for conventional liquids used as heating surface wetting agents; 2) critical heat flows for potassium at p_s=1 - 2 bar, K = 1 - 1.5, and x_{in} <0 are described by the equation

$$q_{cr} = 0.4\, w\rho^{0.8}\, \frac{1 + 5.10^{-4}\Delta t_{heat}}{(1/d)^{0.8}}\ \frac{mw}{m^2}$$

which is valid in the parameter range studies; and

Card 2/3

KOROLEV, V.S., inzh.; TSARNAKH, A.B., inzh.

Pneumatic-tube transportation of raw materials in flax processing plants. Tekst.prom. 20 no.2:21-22 F '60. (MIRA 13:6)

1. Sudislavl'skiy l'nozavod (for TSarnakh).
(Pneumatic-tube transportation)
(Flax)

SAMOYLOV, V.P., inzh.; KOROLEV, V.S., inzh.

Compatible ventilation in flax processing plants. Tekst.prom. 21 no.2:42-43 Ja '61. (MIRA 14:3)
(Textile factories—Heating and ventilation)

KOROLEV, V.V.; GORNSHTEYN, S.M.

Two-sided form for simultaneous laying of double brick blocks.
Rats. i izobr. predl. v stroi. no.2:36-40 '57. (MIRA 11:1)

1.Instruktor peredovykh metodov truda Glavmosstroya (for Korolev).
2.Proizvoditel' rabot tresta Mosstroy No.9 (for Gornshteyn)
(Building blocks)

KOROLEV, Vasiliy Vasil'yevich; KARDO-SYSOYEV, F.N., inzhener, nauchnyy redaktor; KRYUGER, Yu.V., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy redaktor

[Preparation of large brick blocks] Izgotovlenie krupnykh kirpichnykh blokov. Moskva, Gos. izd-vo lit-ry po stroit. i arkhit., 1957. 27 p. (MLRA 10:6)
(Bricklaying)

KOROLEV, V.V.

A 1,000-ton capacity barge with hydromechanical unloading of sand. Biul.tekh.-ekon.inform. no.1:75-76 '60.
(MIRA 13:5)

(Barges)

TAUSON, L.V.; ZLOBIN, B.N.; PEVTSOVA, L.A.; KOROLEV, V.V.

Recent phases in the development of Caledonian intrusions of the Susamyr batholith in the central Tien Shan. Zap. Kir. otd. Vses. min. ob-va no.1:101-111 '59. (MIRA 14:3)
(Susamyr Range--Rocks, Igneous)

KOROLEV, V.V.

Exhaustion neuroses (neurasthenia caused by overstrain). Zhur. nevr. i psikh. 62 no.5:716-722 '62. (MIRA 15:6)

1. Kafedra psikhiatrii (zav. -- prof. O.V. Kerbikov) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova.
(NEURASTHENIA) (NEUROSES)

KOROLEV, V.V.

Clinical dynamics of neurasthenia. Zhur. nevr. i psikh. vol. 64 no.5:723-729 '64. (MIRA 17:7)

1. Akademicheskaya gruppa klinicheskogo otdeleniya AMN SSSR (nauchnyy rukovoditel' - prof.O.V.Kerbikov), Moskva.

KOROLEV, V.V.

Chronic neurasthenia. Zhur. nevr. i psikh. 65 no.5:726-728 '65.
(MIRA 18:5)

ACCESSION NR: AT4042695 S/0000/63/000/000/0293/0297

AUTHOR: Korolev, V. V.

TITLE: Effects of transverse accelerations on the histological structure of the kidneys of dogs

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 293-297

TOPIC TAGS: acceleration effect, transverse acceleration, renal tissue, renal injury, dog

ABSTRACT: Exposure of dogs to transverse accelerations of 8 g for 3 min and 12 g for 1 min resulted in the following changes of renal histology. Initial changes were represented by hyperemia of the medulla and cortex followed by the proliferation of the connective tissue at the site of extravasations. Approximately 30 days after the experiment, the kidneys of the remaining animals showed a normal histological picture.

Card 1/2

KOROLEV, V.V.

USSR/Chemistry - Spectroscopy

Card 1/1 : Pub. 145 - 2/10

Authors : Borovik-Romanova, T. F.; Korolev, V. V.; and Kutsenko, Yu. I.

Title : Spectroscopic determination of Sr and Li in natural waters

Periodical : Zhur. anal. khim. 9/5, 265-269, Sep-Oct 1954

Abstract : Spectroscopic determination of Sr and Li in various natural waters (~ 200 samples) of different origin, is described. The Sr-content in the investigated water samples was fixed at $1 \cdot 10^{-5}$ to $1 \cdot 10^{-3}$% and that of Li at $1 \cdot 10^{-7}$ to $1 \cdot 10^{-4}$%. The ratio of the Ca content to the Sr content in the studied waters made the determination of the water origin (sea or continental) possible. Seven USSR references (1934-1951). Tables; graph; illustration.

Institution : Acad. of Sc. USSR, The V. I. Vernadskiy Institute of Geochemistry and Analytical Chemistry, Moscow

Submitted : July 9, 1954

Korolev, V.V.

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Spectrum analysis of clays for basic components. E. E. Vainshtein, T. P. Borovik-Romanova, and V. V. Korolev (V. I. Vernadskii Inst. Geochem. and Anal. Chem., Acad. Sci. U.S.S.R., Moscow). *Zhur. Anal. Khim.* 10, 159-63; *J. Anal. Chem. U.S.S.R.* 10, 147-51(1955)(Engl. translation).—As basic components of clays, Si, Al, Fe, Mg, and Ca are considered. The effect of extraneous elements was reduced to a min. by dilg. the samples with CuO and powd. C. Favorable results were obtained by using a mixt. of sample: Cu:powd. C 1:39:60. Under conditions of this study (d.-c. C arc, 10 amp., 250 v.) good results were obtained with an exposure of 60 sec. The spectrum lines used in this method were: Si 2514.3, Al 3082.2, Ca 4226.7 and 3179.3, Mg 2779.8 and 2802.7, and Fe 2599.6 A. For comparison the lines Cu 4275.1, 3073.8, and 2441.6 A. were used. The basic components were detd. in wide range of concns. No interference of one element with another was observed. The reproducibility of results for Al_2O_3 was 1.4, for Fe_2O_3 2.5, for CaO 4.3, for SiO_2 4.5, and for MgO 6.8%. The av. deviation of the results from those of chem. analysis was 4-6%.

M. Hosch

45

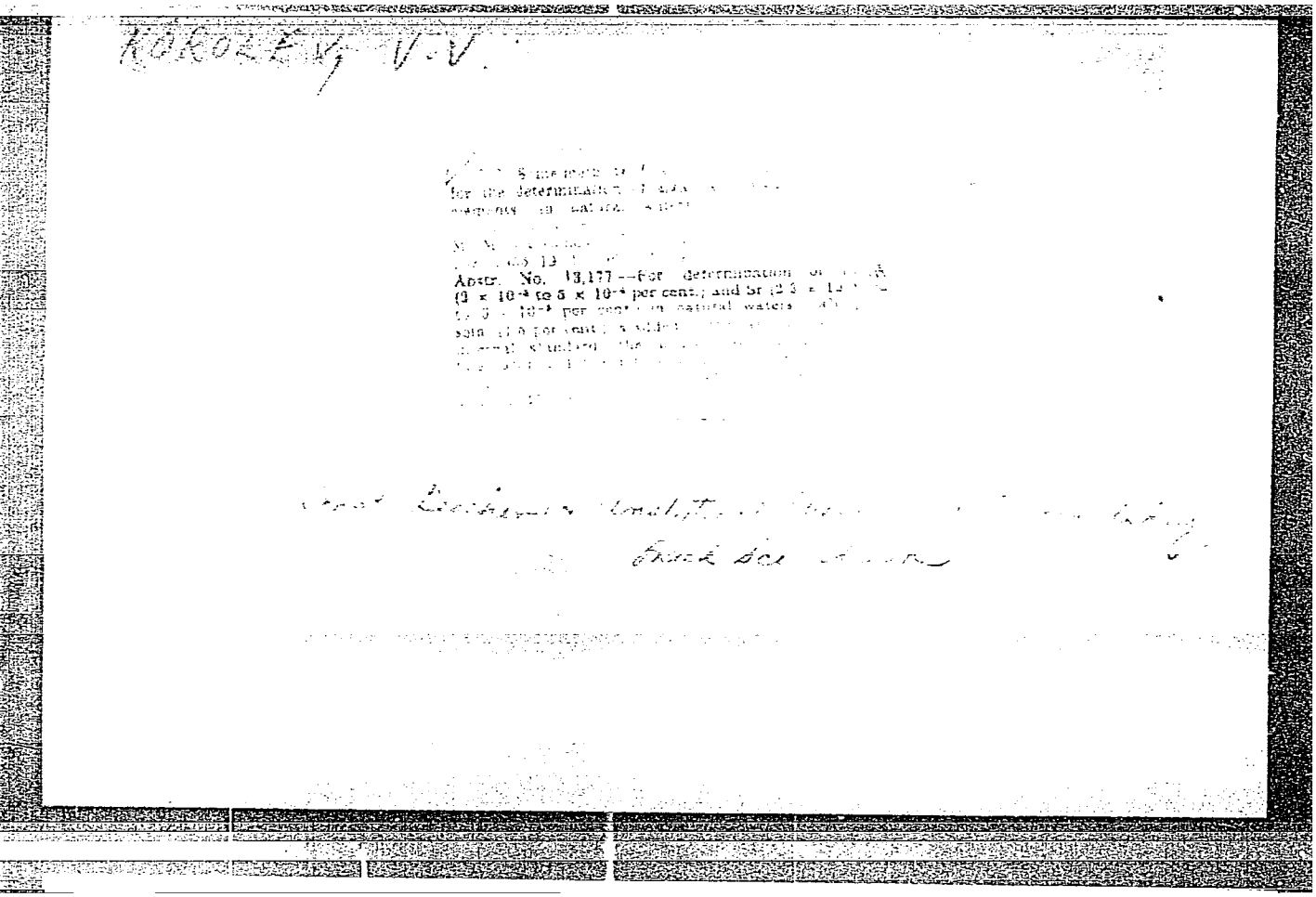
(2)

KUROLEV, V. V.

6080

1031. Spectrographic analysis of clays for basic components. E. E. Vaimbieia, T. F. Borovik-Romanova and V. V. Kurolev (V.I. Vernadskii Inst. Geochem. and Anal. Chem., Acad. Sci. USSR, Moscow). *Zh. Anal. Khim., SSSR*, 1955, **10** (3), 158–163.—A d.c. arc is used to obtain the content of SiO_2, Al_2O_3, MgO, Fe_2O_3 and CaO in clays. The powdered materials are mixed with CuO and carbon powder. Three lines of Cu are used as internal standards. Calibration graphs are obtained by the use of eight synthetic standards.

G. S. Smith



Abstr. No. 13,177.—For determination of [illegible] (9 × 10⁻⁴ to 6 × 10⁻³ per cent.; and Sr (2.3 × 10⁻⁴ to 5 × 10⁻³ per cent. in natural waters [illegible]

Korolev, V. V.

USSR/ Analytical Chemistry. Analysis of Inorganic Substances. G-2

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27141.

Author : E.O. Vaynshteyn, V.V. Korolev.

Title : Spectral Determination of Sodium and Potassium in Silicate Rocks.

Orig Pub: Zh. analit. khimii, 1956, 11, No. 5, 627 - 633.

Abstract: The sample is mixed with Li_2CO_3, CuO and charcoal powder in the ratio of 1 : 0.5 : 1 : 1.5 and packed in the carbon electrode. The spectra are excited in an alternating current arc at 5 a and photographed with the spectrograph ISP-51 on "Infrachrom-840" plates. The analytical lines are: Na - 8194, 8183; K - 7664, 7696, and Li - 8126 A. The graphs are plotted on co-ordinates ΔS and log C; in case of concentration greater

Card 1/2

KITAYEVA, S.Sh.; KOROLEV, V.V.

Studying the process of woodpulp electrodialysis. Bum.prom. 32 no.6:4-7 Je '57. (MLRA 10:8)

1.Moskovskiy filial TSentral'nogo nauchno-issledovatel'skogo instituta bumagi i Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo Akademii nauk SSSR.
(Woodpulp) (Electrodialysis)

AUTHORS: Korolev, V. V., Sidorova, I. I. SOV/89-5-1-3/28

TITLE: The Electric Simulation of a Nuclear Reactor (Elektricheskoye modelirovaniye yadernykh reaktorov)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 1, pp. 29-43 (USSR)

ABSTRACT: The use of an electric simulator for the computation of reactor-physical problems shortens the time necessary for computation. On the basis of a number of linear simulators: IPT-4, IPT-5 and MPT-9 and nonlinear simulators: MPT-11, MN-7, MN-2, MN-1, MN-8, EMU-5L in a set with EMU-5n, and MN-M in a set with NNB, it is shown what advantages can be expected and what disadvantages must be taken into account when using such a device.
The method of solving the following problems by means of the simulator of the type MN7 is described:
1.) Simulation of the isotope state of the nuclear fuel during burn-up.
2.) Simulation of non-steady processes in the reactor.
3.) Calculation of the system of the automatic control of reactor power.

Card 1/2

The Electric Simulation of a Nuclear Reactor SOV/89-5-1-3/28

4.) Simulation of Power reactors.
5.) Imitation of the thermal system of the reactor.
6.) Perspectives in the development of computers which can be used at atomic power stations.

There are 13 figures, 2 tables, and 27 references, 10 of which are Soviet.

SUBMITTED: February 21, 1958

1. Reactors--Simulation 2. Reactors--Properties 3. Atomic power plants--Control systems 4. Mathematical computers--Development

Card 2/2

5(2)

AUTHORS: Korolev, V. V., Vaynshteyn, E. Ye. SOV/75-13-6-1/21

TITLE: The Use of an Impulse Source for Spectra Excitation in the Spectral Analysis of Silicates (Primeneniye impul'snogo istochnika vozbuzhdeniya spektrov dlya vypolneniya spektral'nogo analiza silikatov)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 6, pp 627-634 (USSR)

ABSTRACT: The known spectroscopic methods for the performance of silicate analyses (Refs 1-9) require troublesome preliminary operations and have a relatively low sensitivity. By the use of high-temperature impulse sources for the excitation of the spectra, however, the accuracy of the spectrum analysis of silicates can be increased. Levintov (Refs 10-13) used an impulse source for the spectroscopic determination of metalloids. The impulse intensification of the current of a stationary arc was therein realized by the periodic discharge of a high-tension condenser by this current. Such a high-temperature impulse source was also used by the authors of the present paper. As stationary element a direct-current arc with carbon electrodes was used which was fed by a mercury

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rectifier, and as impulse element a condensed spark from an IG-2 generator. Optimum conditions of this impulse source were experimentally determined by using data of publications (Refs 18-20). These conditions are referred to in the paper, as well as a wiring diagram of this device. The intensification of the impulse thus attained an intensity of 400-500 A. For temperature determination of the impulse arc a simplified modification of the method described by Ornstein (Refs 21,22) was used. This method is applicable to impulse sources in which a Boltzmann distribution of the atoms and ions is occurring on maintained equilibrium. If the absolute values of the probability of the transitions are unknown for the various spectral lines, by means of this method the temperature of the source can be approximately estimated by comparison with another source the temperature of which is known. In this way, temperatures of nearly 10000°K were determined for the impulse source used. The source described possesses a much more homogeneous distribution of the excited atoms and ions in the plasma than an ordinary direct-current arc. The relative intensity of the lines of various elements depends

The Use of an Impulse Source for Spectra Excitation in the Spectral Analysis of Silicates

SOV/75-13-6-1/21

only slightly on their homology. By means of this impulse source the authors have devised a method for the quantitative spectroscopic determination of Si, Ti, Al, Fe, Ca, Mg, Mn, Na and K in silicates. This method does not require an intense dilution of the sample with copper oxide and coal powder. The average arithmetic error of the determination of the elements mentioned is 2-3%. The maximum deviations between the spectroscopic and chemical analyses carried out do not exceed 4%. The application of the new determination method devised is described there in detail. There are 9 figures, 3 tables, and 27 references, 19 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Moscow Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AS USSR)

SUBMITTED: March 11, 1958

Card 3/3

SOV/75-14-2-1/27

5(4), 5(2) AUTHORS: Belyayev, Yu. I., Vaynshteyn, E. Ye., Korolev, V. V.

TITLE: Comparative Investigation of the Spatial Distribution of Elements in a Direct Current— and a Pulsed Current Arc by Means of Radioactive Isotopes (Sravnitel'noye issledovaniye prostranstvennogo raspredeleniya elementov v duge postoyannogo toka i impul'snoy duge pri pomoshchi radioaktivnykh izotopov)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 2, pp 147-151 (USSR)

ABSTRACT: The authors carried out their examinations by means of a method that has been described before (Refs 3-5). It was demonstrated that independently of the character of distribution of the elements within the plasma of a d.c. arc, uniform distribution with distinctly marked maximum occurs for all elements with the exception of the alkali metals in an impulse arc. This maximum is located within the center of the space between the electrodes. The exceptional position of the alkali metals is explainable by their lower ionization potentials. With these elements equal distribution in the space between the electrodes may be obtained by dilution of

Card 1/3

case in the plasma of which the separated from the anode is tribution is equal within the center between the electrodes of an impulse arc. More- the plasma of an impulse arc a characteristic "protuberance" appears, marked by higher density and which is in immediate connection with the substance contained within the crater of the anode. By this phenomenon it may be concluded that, besides by normal interspaced distillation, the entry of the elements into the space between the electrodes can also result by periodical "injections" of the melted substance to be analyzed. The kinetics of evaporation

Card 2/3

Comparative Investigation of the Spatial Distribution of Elements in a Direct Current— and a Pulsed Current Arc by Means of Radioactive Isotopes

and the spatial distribution of the elements has been examined by means of various silver combinations, sodium chloride and copper chloride. The resulting curves depend upon the sort of the respective combinations. This points to the fact that the state of the atoms of the examined elements is not equivalent within the plasma if the elements are evaporated in the form of various combinations. The curves of distribution obtained are given by several illustrations. For his aid in conducting these examinations the authors express their gratitude to N. P. Yakovlev. There are 8 figures and 7 references, 6 of which are Soviet.

ASSOCIATION.: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva
(Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the AS USSR, Moscow)

SUBMITTED: May 22, 1958

KOROLEV, V.V.

PHASE I BOOK EXPLOITATION SOV/4443

Akademiya nauk SSSR. Komissiya po analiticheskoy khimii

Metody opredeleniya primesey v chistykh metallakh (Methods of Determining Admixtures In Pure Metals) Moscow, 1960. 411 p. (Series: Its: Trudy, 12) 3,500 copies printed.

Resp. Eds.: A.P. Vinogradov, Academician, and D.I. Ryabchikov, Doctor of Chemical Sciences; Ed. of Publishing House: M.P. Volynets; Tech. Ed.: T.V. Polyakova.

PURPOSE: This collection of articles is intended for chemists, metallurgists, and engineers.

COVERAGE: The articles describe methods for detecting and determining various admixtures and their traces in pure metals. Also discussed are many chemical, physicochemical, electrochemical, spectrochemical and luminescence methods of analyzing materials of high purity. The editors state that these methods have been developed within the last five or six years by various Soviet scientific institutes, and are now widely used in research and factory laboratories of the Soviet Union. No personalities are mentioned. References, mostly Soviet, accompany each article.

Card 4/9

(4)

RYABCHIKOV, D.I.; VAYNSHTEYN, E.Ye.; BORISOVA, L.V.; VOLYNETS, M.P.; KOROLEV, V.V.; KUTSENKO, Yu.I.

Spectrochemical method of determining bismuth, cadmium, antimony, tin and lead in metallic tungsten, niobium and tantalum. Trudy Kom. anal. khim. 12:82-93 '60. (MIRA 13:8)

(Tungsten--Analysis) (Niobium--Analysis)
(Tantalum--Analysis)

KOROLEV, V. V.

report to be submitted for the IUPAC. 21st Conference and 13th Intl. Congress of
Pure and Applied Chemistry, Montreal, Canada, 2-12 August 1961

GORODISKIY, A. V., Academy of Sciences UkSSR, Kiev - "The oscillographic investi-
gation of the electrochemical kinetics in fused salts" (Section A.3,e.2 - Session
I, 11 Aug 61, afternoon)
GURVICH, L. V., Academy of Sciences USSR, Moscow - "The calculation of thermodynamic
functions of gases in a wide temperature range" (Section A.3,c,(1), Session II -
8 Aug 61, afternoon)
KARGIN, V. A., Physico-Chemical Institute imeni L. Ya. Karpov, Moscow - "Vitrification
phenomena in crystallin polymers" (Section B.4 - 7 Aug 61, afternoon)
KISELEV, A. V., Moscow State University imeni M. V. Lomonosov - "The influence of
surface heterogeneity and adsorbate-adsorbate interaction on the adsorption
properties of solid surfaces" (Joint Session, Sections A.2 and B.1 - 8 Aug 61,
morning)
KONDRAT'YEV, V. N., Institute of Chemical Physics, Academy of Sciences USSR, Moscow -
"The BO_2 radical" (Section A.1, Session I - 11 Aug 61, morning) (Also, Section
A.1, Chairman, Session I - 8 Aug 61, morning)
KUZNETSOV, V. I., Institute of Geochemistry and Analytical Chemistry imeni V. I.
Vernadskiy, Academy of Sciences USSR - "A novelty in the use of organic co-
precipitants for concentration of small amounts of the elements" (To be presented
in Russian) (Section C.2 - 11 Aug 61, morning)
LAVRUKHINA, A. K., BARDYSKIY, E. S., and MOSKALEVA, L. P., Institute of Geochemistry
and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "New
data on radiochemical investigations of the processes of fission and fragmentation
induced by high energy protons" (Section A.4 - 8 Aug 61, afternoon)
LOVACHEV, L. A., Academy of Sciences USSR, Moscow - "Determination of rate constants
of elementary processes from flame velocities as a function of temperature,
pressure, and molecular transfer coefficients" (Section A.3,b,(2) - 7 Aug 61,
afternoon)
MINDIATH, S. (Probably MINDYATH, S.) and GERASIMOV, Y. I., Moscow State University
imeni M. V. Lomonosov - "Study of the thermodynamic properties of the system
iron-latinum" (Section A.3,c,(3), Session II(A) - 11 Aug 61, morning)
PANCHENKOV, G. M., KOLCHIN, A. M., MALANOV, V. P., and SHEVIN, Ya., Moscow State
University imeni M. V. Lomonosov - "Emission of complex ions in solid-phase
reactions" (Joint Session, Sections A.2 and B.1, 8 Aug 61, morning)
SEMENOV, N. N., Institute of Chemical Physics, Academy of Sciences USSR, Moscow -
"Certain chemical reactions at reduced temperatures and related problems of energy
transfer" (To be presented in Russian) (Plenary lecture - Saturday, 12 Aug 61)
SHILOV, Ye. A., Academy of Sciences UkSSR, Kiev - "The active agents and the inter-
mediary complexes in the heterolytic reactions of halogenation of the organic
compounds" (Section A.1, Session II - 11 Aug 61, morning)
SMIRNOV, M. V., Electrochemistry Institute, Sverdlovsk - "The equilibrium between
the titanium subgroup metals and the salt melts" (Section B.3 - 7 Aug 61, afternoon)
TAL'ROZE, V. L., Institute of Chemical Physics, Academy of Sciences USSR - "Reactions
of ions and molecules in the gas phase" (Section A.1, Session I - 9 Aug 61,
afternoon)
TERENIN, Aleksandr N., Leningrad State University imeni A. A. Zhdanov - (Section A.1,
Chairman, Session I - 8 Aug 61, afternoon Session) (Also on program for Section
A.1, Session I - 9 Aug 61, afternoon)
TERENIN, Aleksandr N., VILESOV, F. I., KURBATOV, B., and DODONOVA, N., Leningrad
State University imeni A. A. Zhdanov - "Mass-spectrometry and luminescence of
radicals in the photodissociation and photoionization of molecules by vacuum
ultra-violet radiation" (Section A.1, Session I - 9 Aug 61 - afternoon)
TUNITSKIY, N. N., Scientific Research Physico-Chemical Institute imeni L. Ya. Karpov -
"On the dissociation of molecules on electron impact and the early states of
radiation-chemical processes" (Section A.1, Session I - 8 Aug 61, afternoon)
YATSIMIRSKIY, Emmanuil Ye., and KOROLEV, V. V., Institute of Geochemistry and
Analytical Chemistry imeni V. I. Vernadskiy, Moscow - "The plasma generator and
its use for spectral analysis of alloys and rocks" (Section C.1 - 8 Aug 61, morning)
VINOGRADOV, A. P., LAVRUKHINA, A. K., and REVINA, L. D., Institute of Geochemistry
and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "The
study of nuclear reactions in iron meteorites under the action of high energy
protons" (Section A.4 - 8 Aug 61, afternoon)
YAKOVLEV, Yu. V., and ALIMARIN, I. P., Institute of Geochemistry and Analytical
Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "The determination
of trace impurities in some materials for semiconductor techniques by radio-
activation analysis" (To be presented in Russian) (Section C.1 - 8 Aug 61, afternoon)

YEREMEYEV, Boris V., Institute of Physical-Organic Chemistry, Minsk - "The effect
of donor and acceptor admixtures on the decomposition rate of solids" (Section
A.2 - 8 Aug 61, afternoon)

S/075/60/015/004/008/030/XX
B020/B064

AUTHORS: Korolev, V.V. and Vaynshteyn, E. Ye.

TITLE: The Reasons for the Increased Accuracy of Spectral Analysis When a Pulse Generator Source Is Used

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 4, pp. 413 - 418

TEXT: The expediency of pulse generator to increase the accuracy of spectral analysis was shown in Refs. 1,2, and by means of radioisotopes 19 the first data were found on the spatial distribution of the atoms between the electrodes of the generator. The previous paper continues these investigations and describes the most important physical parameters of the pulse arc which may influence the accuracy of determination, and, finally, the authors attempt to find the reasons for which the accuracy is higher than in the case of an ordinary d.c. or a.c. arc. A more precise measurement was made of the generator temperature, the amperage of the pulse current was estimated, and additional data were obtained on the way of the substance into the discharge zone. The temperature of the pulse generator

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The Reasons for the Increased Accuracy of Spectral Analysis When a Pulse Generator Source Is Used

S/075/60/015/004/008/030/XX
B020/B064

was determined by Ornshteyn's method and on the basis of the BiI bands. For reasons of comparison, the temperature of an ordinary d.c. arc was determined on the basis of the same bands. ZnO served as a filler in both cases. Bi_2O_3 was mixed with ZnO and introduced into the anode. Fig. 1 gives the results of a series of measurements of the temperature of the pulse and d.c. arcs; the energies of the upper levels of the Bi bands were plotted in cm^{-1} on the abscissas and the corresponding values $(1/0.625)\log(1/P)$ on the ordinate. The plasma temperature was graphically determined from the angular coefficients in these coordinates, and amounted to 8700°K for the pulse arc, and to 6200°K for the d.c. arc. This is in agreement with the data of Ornshteyn and N. N. Sobolev. The oscillogram of the current of the d.c. arc recorded in a synchronous manner by a special oscillographic method, is shown in Fig. 2. The pulse time was determined to be $1.4 \cdot 10^{-5}$ sec, the inductivity of the resonant circuit to be $0.44 \cdot 10^{-6}$ H, and the pulse current maximum to be 540 a. Some results of the experiments carried out to study the spatial distribution of various

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elements in the d.c. and a.c. pulse arcs are given (Figs. 3, 4, 5). The distribution of the excited atoms and ions in the pulse arc plasma is characterized by uniformity, as well as by the fact that, in contrast with the d.c. arc, the intensity is independent of the ionization potential of the element. Only elements with low ionization potentials, whose regular distribution can only be attained in the AC arc, form an exception. Fig. 6 graphically shows the change of the blackening degree of the analytical bands of the elements with time in their evaporation from the "crater" of the carbon electrode in the pulse and d.c. arcs, while Fig. 7 shows the scheme of the experiments made to determine the influence of the spark torch on the spatial distribution of the excited zink atoms and ions. Fig.8 shows the change of intensity of the zink bands ZnI 3075 and ZnII 2557.9 along the gap between the electrodes of the pulse generator in projecting radiation upon the slit of the spectrograph in the presence and absence of a spark torch. There are 8 figures and 10 references: 9 Soviet and 1 Dutch.

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5.5800 1043, 1136, 1273

S/075/60/015/006/007/018
B020/B066

AUTHORS: Korolev, V. V. and Vaynshteyn, E. Ye.

TITLE: An Attempt of Using a Plasma Generator for the Spectroscopic Analysis of Silicates

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 6, pp. 686-691

TEXT: Besides other scientists, the authors of Ref. 2 pointed out that plasma generators are suitable as new efficient sources for the excitation of spectra. They showed that the accuracy of spectroscopic analysis of a number of elements is thus increased. In the present paper, the first results of spectroscopic analysis of silicates obtained by means of this new source are reported. The construction of the plasma generator for the analysis of solutions is described in detail (Fig. 1). This generator was tested at different amperages and pressures of the cooling gas. The following conditions were most favorable: amperage 15 - 22 a, and inlet pressure into the sprayer 0.8 - 1.2 atmospheres overpressure. Fractional distillation of the elements can be avoided by introducing the analyzed

Card 1/4

An Attempt of Using a Plasma Generator for the Spectroscopic Analysis of Silicates

S/075/60/015/006/007/018
B020/B066

amperage 20 a. Form and dimensions of electrodes are shown in Fig. 4. The electrode spacing was 4 mm. The analytical bands of the elements determined, and the corresponding bands of the reference element are given in Table 1. Also the optimum concentration ranges, when using the given pair of bands, are shown there. Molybdenum was used as reference element in the determination of Ti, Al, Fe, Mg, Ca, and Mn, and lithium in the determination of alkali metals. The resultant spectrograms were determined on an МФ-2 (MF-2) microphotometer. When analyzing the first group of elements, the calibration curves were plotted in the coordinates ΔS - log C (Fig.5); in the case of Na and K, the method of the spectrum band width (Refs. 7,8) was used (Fig. 6). The calibration curves are in both cases straight lines in a wide range. The mean square error in the analysis of elements fluctuates between 2.5 and 3.5% (Table 2). The results obtained are compared with those of the chemical and spectroscopic analyses (Table 3). The authors express their gratitude to N. I. Koroleva for assistance in the experiments. V. V. Nalimov is mentioned (Ref. 9). There are 6 figures, 3 tables, and 9 references: 7 Soviet and 2 US.

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KOROLEV, V. V.

Cand Tech Sci - (diss) "Study and development of new methods of spectral analysis of silicates." Moscow, 1961. 20 pp; 1 page of tables; (Ministry of Geology and Conservation of Mineral Resources USSR, All-Union Scientific Research Inst of Mineral Resources "VIMS"); 200 copies; price not given; (KL, 7-61 sup, 238)

28282
S/075/61/016/005/001/010
B101/B110

5.5310

AUTHORS: Vaynshteyn, E. Ye., Korolev, V. V., and Savinova, Ye. N.

TITLE: Conditions for the spectrum excitation of elements in a plasma generator, and its use for spectrum analysis

PERIODICAL: Zhurnal analiticheskoy khimii, v. 16, no. 5, 1961, 532 - 537

TEXT: The inhomogeneous distribution of alloying additions and of impurities in titanium alloys rules out their analysis in spark or arc spectra. The authors therefore suggest the plasma generator as a new excitation source for the spectrum analysis of solutions. The present paper reports on systematic studies on the influence of different conditions upon the blackening of lines of various elements, as well as on the method of analyzing titanium alloys. Results: (1) The excitation energy of spectrum lines affects the shape and position of blackening maxima. If the energy is reduced, the maxima become broader and their distance from the origin of the jet increases. (2) Anions do not affect the blackening degree. (3) The difference, ΔS, between the blackening degrees of the two iron lines Fe II 2598.4 and Fe I 2719.02 decreases linearly along

Conditions for the spectrum excitation ...

the jet. Addition of 50% alcohol does not alter this ratio but decreases the temperature, broadens the maxima, and shifts them toward the origin of the jet. The analytical method devised can be used to determine Al, Cr, Mo, Fe, Si, V, Mn, and Sn in Ti alloys. In the present paper, however, only the determination of Al, Cr, Mo, V, and Mn is described. The standard solutions were obtained by mixing the calculated quantities of solutions of the chlorides of the elements to be determined with the $TiCl_4$ solution. Cobalt salt (10 mg/ml of Co) was used as the reference element. 5 ml of its solution was added to 50 ml of the test solution. 0.5 g of the alloy to be analyzed was dissolved in 20 ml pure HCl. $TiCl_3$ was oxidized by dropwise addition of concentrated HNO_3, and 5 ml of Co salt solution was added. The spectrum analysis was carried out with a plasma generator described by V. V. Korolev, E. Ye. Vaynshteyn in Zh. analit. khimii, 15, 686 (1960), whose nozzle had a diameter of 6.5 mm. About 6.5 liter/min of cooling gas (argon) was spent, the gas pressure at the input of the atomizer was 2.5 at, the consumption of solution was 6 - 8 milliliter/min, and the electrode spacing was 3 mm. The plasma generator was operated with 20 a and 270-v d-c. A distance of 22 mm from the origin

S/058/62/000/012/023/048
A160/A101

AUTHORS: Vaynshteyn, E. Ye., Korolev, V. V., Savinova, Ye. N.

TITLE: The use of a plasma generator for the spectral analysis of titanium-base alloys

PERIODICAL: Referativnyy zhurnal, Fizika, no. 12, 1962, 31, abstract 12G311 ("Chem. analit." (Polska), no. 1, 1962, 7, 187 - 194; summary in Polish)

TEXT: The expediency is shown of using a plasma generator as a spectrum-excitation source during a quantitative analysis of alloying admixtures (Al, Cr, Mo, V, Mn, Fe, Si, Sn, etc.) in titanium alloys. A method was developed for determining the first five of these elements whose contents in the various alloys vary within 0.1 - 10%. Presented are parts of the design, outside view, and the parameters of the plasma generator which are best for carrying out the analysis. The alloys, subject to the analysis, were preliminarily converted to solution, or the standard solutions were converted to aerosol by an atomizer and introduced, together with the cooling gas, in the interior cavity of the generator,

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and later on - in the jet of the plasma. The mean arithmetic error of the reproducibility of the spectral determination is 3 - 4%. A satisfactory conformity of the results of the chemical and spectral analyses of standard alloys was obtained.

F. Ortenberg

[Abstracter's note: Complete translation]

Card 2/2

VAINSHTEIN, J.E.; KOROLEV, V.V.; SAVINOVA, E.N.

Application of the plasma generator in spectral analysis of titanium alloys. Chemia anal 7 no.1:187-194 '62.

1. The V.I. Vernadskiy Institute of Geochemistry and Analytical Chemistry, Academy of Sciences of the U.S.S.R., Moscow.

KOROLEV, V.V. [Korol'ov, V.V.]

Uniqueness of a limiting cycle of multidimensional autonomous systems. Dop. AN URSR no.11:1430-1433 '64. (MIRA 18:1)

1. Odesskiy gosudarstvennyy universitet. Predstavleno akademikom AN UkrSSR Yu.A. Mitropol'skim [Mytropol's'kyi, IU.O.].

KOROLEV, V.V. (Odessa)

Existence and uniqueness of the periodic solution to n-dimensional autonomous systems. Ukr. mat. zhur. 17 no.2:47-60 '65.
(MIRA 18:5)

L 27241-65 EWT(d)/EWC(k)-2/EED-2/EWP (1) Pm-4/Po-4/Pq-4/Pr-4/Pk-4 IJP(c)
ACCESSION NR: AT5003917 EB/GG/GS/ S/0000/64/000/000/0209/0211

50
AUTHOR: Korolev, V. V.; Karlov, N. P.; Trebina, N. M.; Frolov, A. A. 37
8+1

TITLE: Analog equipment for the processing of experimental curves

SOURCE: Vsesoyuznaya konferentsiya - seminar po teorii i metodam matematicheskogo modelirovaniya. 3d, 1962. Vychislitel'naya tekhnika v upravlenii (Computer technology in control engineering); sbornik trudov konferentsii. Moscow, Izd-vo Nauka, 1964, 209-211

TOPIC TAGS: data processing, data reduction, automatic data correlation, automatic integration, automatic Fourier analysis

ABSTRACT: A combined analog computer intended for the calculation of the mean values of measured quantities and determining the frequency spectrum of an experimental curve, such as may be obtained in heat-physics research, and whose construction is within the capability of a small laboratory, is described. The equipment is based on the use of dc amplifiers with automatic null drift stabilization, and precision wire-wound resistances. Curves traced by an automatic recording

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ACCESSION NR: AT5003917 0

potentiometer (EPP-9) were converted into voltage by means of the potentiometers themselves, using single-turn potentiometers coupled to the automatic potentiometer shaft, and using photoelectric scanning of the curve. Procedures for integration, Fourier analysis, and determination of the correlation function and other relations are described briefly. Only the integration and Fourier-expansion circuits were tested. The integration could be performed in approximately 600 seconds with an error of 1%. Resolution into 15 harmonics accurate to within 3% of the value of the fundamental was effected within approximately 2 hours. Orig. art. has: 1 figure and 7 formulas.

ASSOCIATION: None

SUBMITTED: 17Aug64 ENCL: 00 SUB CODE: DP

NR REF SOV: 003 OTHER: 000

Card 2/2

KOROLEV, V.V.

Existence and uniqueness of the limiting cycle of n-dimensional autcnomous systems. Diff. urav. 1 no.6:736-741 Je '65. (MIRA 18:7)

1. Odesskiy gosudatstvennyy universitet imeni I.I. Mechnikova.

L 32169-66 EWP(j)/EWT(m)/T IJP(c) RM/WW

ACC NR: APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824820004-3

INVENTOR: Berlin, A. A.; Kefeli, T. Ya.; Filippovskaya, Yu. M.; Sivergin, Yu. M.; Korolev, V. V.; Makhonina, L. I.; Leogon'kiy, B. I.

ORG: none

TITLE: Preparation of polyacrylate esters. Class 39, No. 180335

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 57

TOPIC TAGS: polyester, acrylate, polymerization

ABSTRACT: An Author Certificate has been issued describing a method of preparing polyacrylate esters by low-temperature polymerization in bulk of monomeric and oligomeric acrylate esters in the presence of peroxide initiators. To speed up the process the system benzene peroxide plus polyazophenylene plus filler with a developed surface such as PK-3, K-40 is suggested as the initiator. The polymerization is carried out in the presence of an inhibitor of medium potency, for instance benzoquinone or diphenylamine. [LD]

SUB CODE: 11,07/ SUBM DATE: 22Aug62

Card 1/1

UDC: 678.674'2'0

CHERYSHEV, N.V.; KOROLEV, V.V.; SHUTOVA, V.S.

Effect of vitamin B_{12} on the pathogenesis of the early stages of ascariasis. Trudy 1-go MMI 41:97-101 '65.

(MIRA 18:12)

KOROLEV, V.V.

Clinical aspects of preneurotic states. Probl. obshchei i sud. psikh. no.14:54-58 '63.

Pathological formation of personality in patients with congenital vitium cordis. Ibid.:60-69 (MIRA 18:9)

L 12039-65 EWT(l)/EWG(k)/EWT(m)/EPA(sp)-2/EPF(n)-2/EPA(w)-2/T/EWA/EWP(b)
Pz-6/Pab-10/Pu-4 IJP(c)/BSD/ASD(f)-2/AEDC(a)/AFETR/SSD/AFWL/RAEM(t)/ESD(gs)/
ACCESSION NR: AP4045299 ESD(t) JD/JG/AT S/0048/64/028/009/1454/1460

AUTHOR: Soboleva, N.A.; Korolev, V.Ye.; Shefov, A.S.

TITLE: Investigation of the residual gas composition in vacuum tubes with multi-alkali cathodes /Report, Tenth Conference on Cathode Electronics held in Kiev 11-18 Nov 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.9, 1964, 1454-1460

TOPIC TAGS: photocathode, fatigue, gas absorption, gas formation, mass spectrometry, aging

ABSTRACT: The composition of the residual gas in vacuum tubes containing multi-alkali cathodes was determined as part of an investigation of the processes of aging and fatigue in these tubes. An omegatron, a high frequency magnetic mass spectrometer with a sensitive element of small volume, was employed. A number of difficulties were encountered in the measurements, and these, and the means by which some of them were partly overcome, are discussed at length. The multi-alkali cathodes proved to be excellent gas absorbers, and special means (e.g. a titantium getter) had to be employed to improve the vacuum in the sensitive element of the omegatron.

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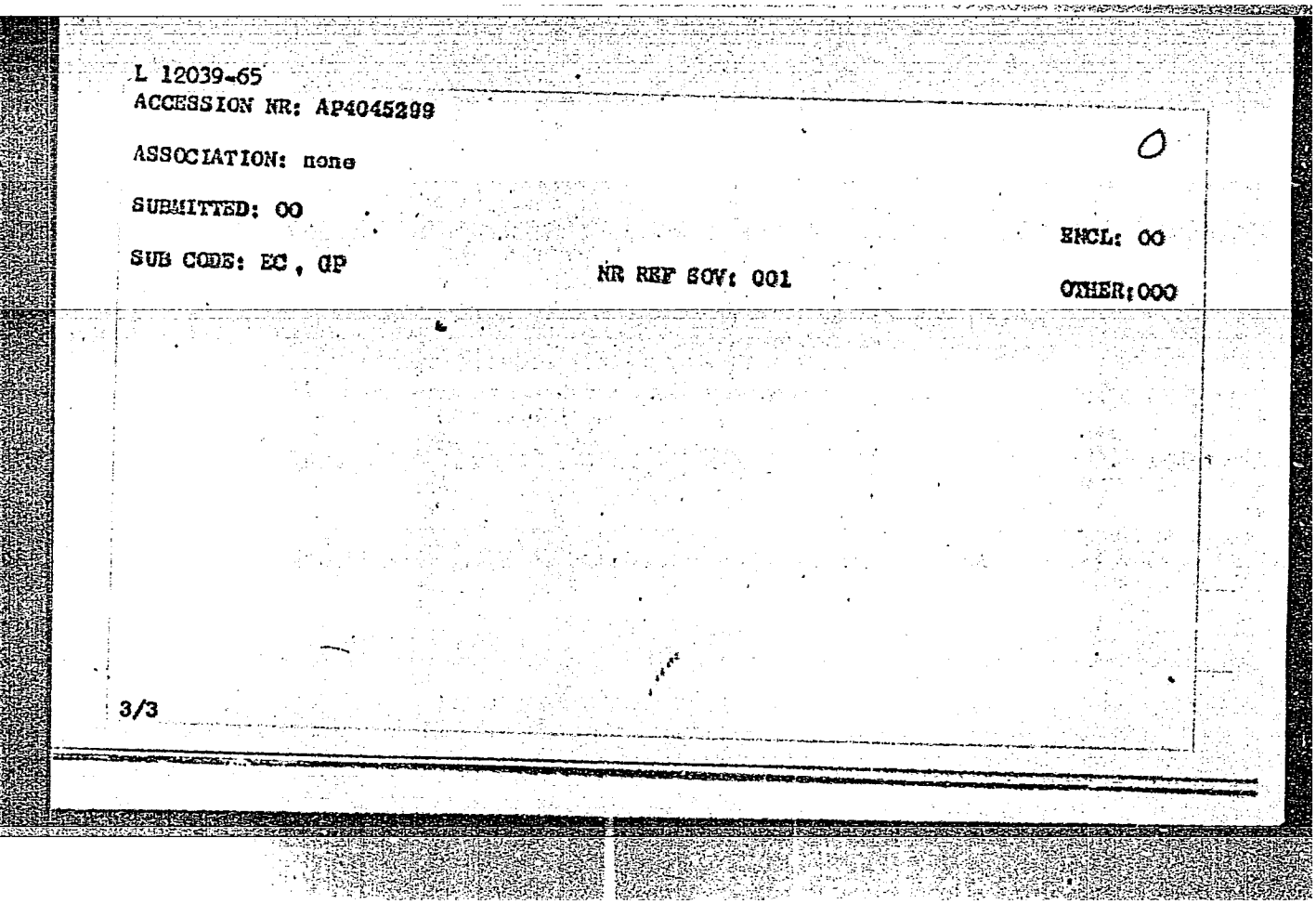
The alkali metal vapor pressure could not be measured with the omegatron; it was, indeed, necessary to protect the omegatron from alkali metal vapor during the preparation of the cathodes. The principal constituents observed in the residual gas were N_2, CO, CH_4, A, Ne and sometimes CO_2 and H_2O. The active gases CO, CO_2, H_2O and CH_4 were strongly absorbed by the photocathode with an accompanying change (usually deleterious) in sensitivity. The loss in sensitivity during storage was found to be accompanied by a decrease in the pressure of these gases. Any operations that led to an increase in the pressure of the active gases (and these included sealing off the glass stem) led also to reduction of the photocathode sensitivity. Applying a potential to the electrodes without drawing a current produced only a small change in the composition of the residual gas. When current was drawn, the H_2O and CH_4 pressures increased reversibly. It is suggested that the evolution of these gases may be due to local heating of the cathode by the photocurrent. It is concluded that at least one reason for the loss of sensitivity of multi-alkali photocathodes during storage is the gradual absorption of CO, CO_2, H_2O and CH_4 by the cathode, but that these gases are not involved in the fatigue process. It is suggested that fatigue may be due to a redistribution of the alkali metals between the cathode and other parts of the instrument. Orig.art.has: 3 figures and 1 table.



L 12039-65
ACCESSION NR: AP4045299

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC, GP

NR REF SOV: 001

OTHER: 000

3/3

KOROLEV, Ya.

From the practice of organizing work and mechanizing accounting for pension operations. Den. i kred. 20 no.10:54-56 O '62. (MIRA 15:12)

1. Glavnyy bukhgalter L'vovskoy oblastnoy kontory Gosbanka.
(L'vov Province—Banks and banking—Accounting) (Machine accounting)
(Pensions)

ANAN'YEV, Yu. A.; KOROLEV, Ye.A.

Distribution of pumping radiation density in a laser crystal.
Opt. i spektr. 16 no. 4:702-704 Ap '64. (MIRA 17:5)

ACCESSION NR: AP4032875

S/0051/64/016/004/0702/0704

AUTHOR: Anan'yev, Yu.A.; Korolev, Ye.A.

TITLE: Distribution of the pumping radiation density in a laser crystal

SOURCE: Optika i spektroskopiya, v.16, no.4, 1964, 702-704

TOPIC TAGS: laser, laser pumping, laser absorption, ruby laser, fluorite laser, laser crystal

ABSTRACT: In the usual cylindrical-type laser system the radiation from the illuminator (flash tube + reflector) is incident isotropically on the surface of the laser rod or tube. Accordingly, most earlier calculations of the distribution of the pumping radiation within the specimen were based on the assumption that the incident radiation is isotropic only in the plane perpendicular to the axis of the cylinder (G.E.Devlin, J.McKenna, A.D.May and A.L.Schawlow, Appl.Optics,1,11,1961) or is incident only normal to the surface of the specimen (K.Tomiyasu, Proc.IRE, 50,2488,1962); consequently, in view of the fact that actually the radiation from the source is incident on any point of the laser crystal at all angles in a 180° range, the results of such calculations do not adequately describe the volume (spatial) distribution of the absorbed radiation within the crystal. The present paper

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ACCESSION NR: AP4032875

gives the results of calculations of the distribution of the pumping radiation through the volume of the crystal in the case of fully isotropic incidence of the radiation on an infinitely long cylindrical crystal with a positive absorption coefficient and smooth surface (no reflection suppressing coating). The departure formula is based on Lambert's law, taking into account the Shtraubel theorem (A.I.Tudorovskiy, Teoriya opticheskikh priborov (Theory of optical instruments), Part 1, Pub.AN SSSR, M.-L.1948). The calculations for the radiation density at a given point inside the crystal are performed using cylindrical coordinates. The results of numerical integration of the deduced formula for the specific cases of ruby and fluorite rods are presented in figures. A third figure gives the variation of the fraction of incident energy absorbed by the crystal as a function of the crystal diameter. Multiple reflection inside the crystal cylinder is taken into account separately. As might be expected, the results of the present calculations differ appreciably from the results obtained by the above mentioned authors. Orig.art. has: 6 formulas and 3 figures.

ASSOCIATION: none

SUBMITTED: 17Jun63

SUB CODE: EC

ATD PRESS: 3078

ENCL: 00

Card 2/2

NR REF SOV: 001

OTHER: 002

KOROLEV, Ye.; KORNEV, M.

Economical wide-span elements. Na stroi. Ros. 4 no.4:4-5 Ap '63. (MIRA 16:4)

1. Upravlyayushchiy trestom Krasnoyarskpromkhimstroy (for Korolev).
2. Glavnyy tekhnolog tresta Krasnoyarskpromkhimstroy (for Kornev).

(Krasnoyarsk—Chemical plants—Design and construction)
(Precast concrete construction)

KOROLEV, Ye.; KORNEV, M.

Precast mesh-reinforced concrete arch or shell with a span of 75 m. Na stroi. Ros. no.2:9-11 F '61. (MIRA 14:6)

1. Upravlyayushchiy trestom Krasnoyarskpromkhimstroy (for Korolev).
2. Glavnyy tekhnolog tresta Krasnoyarskpromkhimstroy (for Kornev).
(Roofs, Shell)
(Krasnoyarsk—Precast concrete construction)

28 (5)

05752

AUTHORS: Korolev, Ye. M., Roy, V. I., Matveyeva, V. A. SOV/32-25-10-41/63

TITLE: Waterproofing Transmitters Which Measure Deformations Under Higher Pressure

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1250 - 1252 (USSR)

ABSTRACT: Investigations of the state of stress in damaged parts of industrial devices for high pressure were carried out by the tensiometric method. For the determination of deformations on the inner surfaces it was necessary to seal the transmitters against the action of water at high pressure (400-900 atm). The carbinol paste prepared for this purpose at the NIIKhIMMASh (Ref 1) proved to be inadequate. Various sealing media were tested (Table) such as bakelite varnish, silicon nitroglyphtal glue 192-T, bitumen varnish, nitro lacquer, carbinol paste, perchlorovinyl paste, technical vaseline-paraffin mixtures, and "Pushsalo"). The sealing qualities were tested by means of the transmitter of the type ET-1, and it was found that the two last-mentioned substances effect the best sealing. As the outlet of the transmitters had to be altered also for tests to be carried out at high pressure under water, a new construction

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was worked out also for the latter (Figure), which provides for a chlorovinyl insulation with a rubber insert. There are 1 figure, 1 table, and 2 Soviet references.

ASSOCIATION: Irkutskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i konstruktorskogo instituta khimicheskogo mashinostroyeniya (Irkutsk Branch of the All-Union Scientific Research- and Designing Institute for Chemical Machine Building)

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